CLAIMS

1. A method for routing a first optical beam, the method comprising:

providing a first mirror and a second mirror, both of which are steerable;

providing a second optical beam ;

propagating the first optical beam such that the first optical beam is reflected by the first mirror prior to being reflected by the second mirror;

propagating the second optical beam such that the second optical beam is reflected by the second mirror prior to being reflected by the first mirror; and

orienting the first mirror and the second mirror such that the first and second optical beams are coincident at both the first mirror and the second mirror.

2. The method of claim 1, wherein:

the method additionally comprises:

detecting a position of the first optical beam on each of the mirrors;

detecting a position of the second optical beam on each of the mirrors; and

in orienting the first mirror and the second mirror, the mirrors are oriented in response to the positions detected.

3. The method of claim 2, wherein, in orienting the first mirror and the second mirror, the first and second optical beams are positioned to be coincident at centered positions of the mirrors.

4. The method of claim 2, wherein:

each of the first and the second mirrors comprises a partially-reflective surface and a photodetector, the partially-reflective surface being operable to reflect a portion of light incident thereon and to pass through the remainder of the light to the photodetector; and

detecting positions of the first and second optical beams is accomplished using the photodetectors.

5. The method of claim 1, wherein:

the method additionally comprises:

providing a first fixed mirror; and

in propagating the first optical beam, the first optical beam is reflected by the first fixed mirror prior to being reflected by the first steerable mirror.

6. The method of claim 5, wherein:

the method additionally comprises:

providing a second fixed mirror; and

in propagating the second optical beam, the second optical beam is reflected by the second fixed mirror prior to being reflected by the second steerable mirror.

7. The method of claim 1, wherein the first optical beam and the second optical beam differ in wavelength.

8. The method of claim 1, wherein the first optical beam is modulated at a first frequency and the second optical is modulated at a second frequency that is different than the first frequency.

9. The method of claim 1, wherein the first optical beam carries an information signal.

10. A system for routing a first optical beam, the system comprising:

a first steerable mirror;

a second steerable mirror located to communicate optically with the first steerable mirror; and

a controller operable in response to information indicating respective positions of incidence of first and second optical beams on each of the first and second steerable mirrors and to provide control signals to orient the first and second steerable mirrors to locate the first and second optical beams coincidentally at both the first and second steerable mirrors.

11. The system of claim 10, wherein the controller is operable to locate the first and second optical beams coincidentally at centered positions of the first and second steerable mirrors.

12. The system of claim 10, wherein:

each of the first and second steerable mirrors comprises a partially-reflective surface and a photodetector, each partially-reflective surface being operable to reflect a portion of light incident thereon and to pass the remainder of the light to the photodetector, each photodetector being operable to provide information corresponding to the respective positions of the first and second optical beams to the controller.

13. The system of claim 12, wherein:

the first steerable mirror comprises a rotatable micromirror and a set of electrodes;

the set of electrodes is electrically connected to receive the control signals from the controller.

14. The system of claim 10, further comprising:

a first fixed mirror optically communicating with the first steerable mirror, the first fixed mirror being located such that the first optical beam is reflected by the first fixed mirror prior to being reflected by the first steerable mirror.

15. The system of claim 14, further comprising:

a second fixed mirror optically communicating with the second steerable mirror, the second fixed mirror being located such that the second optical beam is reflected by the second fixed mirror prior to being reflected by the second steerable mirror.

16. The system of claim 15, wherein:

each of the first and second fixed mirrors comprises a partially-reflective surface and a photodetector, each partially-reflective surface being operable to reflect a portion of light incident thereon and to pass the remainder of the light to the photodetector, each photodetector being operable to provide information corresponding to the respective positions of the first and second optical beams to the controller.

17. The system of claim 10, further comprising:

a first modulator operable to modulate the first optical beam at a first frequency; and

a second modulator operable to modulate the second optical beam at a second frequency that is different than the first frequency.

18. The system of claim 10, further comprising:

an optical combiner located to receive the first optical beam and an information beam, the optical combiner being operable to combine the first optical beam and the information beam optically such that the first optical beam carries the information beam.

19. The system of claim 10, further comprising:

means for optically combining the first optical beam and an information beam such that the first optical beam carries the information beam.